TECHNICAL REVIEW AND EVALUATION OF APPLICATION FOR AIR QUALITY PERMIT NO. 1001041

I. INTRODUCTION

The Cochise County Department of Facilities and Solid Waste Management operates the Cochise County Western Regional Landfill (CoCWRL), an active solid waste landfill that accepts municipal solid waste, including residual and commercial waste, and white goods (refrigerators, stoves, etc.). The primary activity of CoCWRL is the transportation and deposition of refuse along with the excavation and stockpiling of cover material and soil.

The natural decomposition of the waste materials, and to some extent the evaporation of volatile compounds in the waste materials, constitute the primary source of emissions. The landfill gas (LFG) that is emitted from the landfill is fundamentally 50 percent methane (CH4) and 50 percent carbon dioxide (CO2), with a fraction containing non-methane organic compounds (NMOCs), hazardous air pollutants (HAPs), and volatile organic compounds (VOCs). Particulate emissions due to traffic on unpaved roads, application of a cover layer of soil, soil stockpiling, cover layer distribution, and wind erosion make up a significant amount of PM10 pollution.

Leachate is collected from the cell that is receiving refuse and transmitted to an on-site evaporation pond. Leachate is generated by precipitation or other moisture which permeates through the waste material in place and is contained by a subsurface leachate collection and recovery system. The leachate is collected using collection pumps and is eventually directed to an evaporation pond.

A. Company Information

Facility Name:	Cochise County Western Regional Landfill
Mailing Address:	1415 W. Melody Lane, Bldg. C
Facility Address:	½ mile north of SR 82 and 4 miles east of SR 90 Cochise County, AZ

B. Attainment Classification

Cochise County Western Regional Landfill is in an Attainment Area with respect to all the criteria pollutants.

II. PROCESS DESCRIPTION

Cochise County Western Regional Landfill (CoCWRL) is an active solid waste landfill (SIC 4953) which accepts municipal solid waste, including residential and commercial wastes. Refuse is trucked in and dumped at a designated location. Current practice is to spread the waste in layers, compacting and covering it with a geosynthetic clay liner and a soil layer. The compacted layers compose the landfill building blocks called cells. The buried waste decomposes biologically and chemically to produce solid, liquid, and gaseous products. Over the course of time the gaseous product which consist of methane, carbon dioxide, non-methane organic compounds, and volatile organic compounds, seeps through the landfill waste and permeates to the surface. This results in landfill gases that are regulated and controlled depending on the age, amount of refuse accepted, and design capacity of the landfill. Currently CoCWRL is below the allowable emission rate for non-methane organic compounds therefore CoCWRL is not subject to the control requirements specified in the New Source Performance Standards (NSPS).

The liquid product that is produced in the landfill is mainly rain runoff that soaks through the landfill and escapes through the outer limits of the landfill. To prevent this from happening a liner and a leachate collection system was installed. The leachate collection system collects the rain runoff, or leachate, and pumps the leachate to a leachate pond. This pond emits an insignificant amount of VOCs and HAPs. The constant transport of waste to and from specific cells along with the compacting and burial of the waste, generates a significant amount of dust and particle matter that is dispersed in the air. Wind erosion of the soil cover and other areas located on the landfill adds to the dust problem.

III. EMISSIONS

Representative emissions from CoCWRL are presented in the following section. These emissions calculations are **not** meant to establish any baseline emissions levels. These emissions figures are **not** meant to be emissions limitations of any form. The emission factors used to calculate the potential to emit are from AP-42 (1/95 ed. & 9/98 ed.)

A. PM10 Emissions for unpaved Roads

Assumptions

- 88% of waste arrives in roll-off containers from urban transfer station
- 4% of waste arrives in roll-off containers from rural transfer stations
- 8% of waste arrives from individuals
- The roll-off containers arrive on vehicles with 18 wheels weighing 20.5 tons (empty).
- Individuals bring waste in vehicles with 4 wheels weighing an estimated 5 tons (empty).

- Waste that fills roll-off containers from urban transfer stations weighs 16 tons.
- Waste that fills roll-off containers from rural transfer stations weighs 4.6 tons.
- Waste loads from individuals weigh 1.4 tons.
- The average speed traveled on the roads within the landfill is 15 mph.
- 190 tons/day waste acceptance rate
- The landfill operates 10 hours/day and 312 days/yr

$E=[k(s/12)^a (W/3)^b]/[(M/0.2)^c]$
where,
E=size-specific emissions factor (lbs/VMT)
k=empirical constant from Table 13.2.2-2 in the AP-42
a=empirical constant from Table 13.2.2-2 in the AP-42
b=empirical constant from Table 13.2.2-2 in the AP-42
c=empirical constant from Table 13.2.2-2 in the AP-42
s=surface material silt content (%)
W=mean vehicle weight (tons)
M=surface material moisture content (%)

k=2.6 (from Table 13.2.2-2 in the AP-42)
a=0.8 (from Table 13.2.2-2 in the AP-42)
b=0.4 (from Table 13.2.2-2 in the AP-42)
c=0.3(from Table 13.2.2-2 in the AP-42)
s=6.4% (value generated from Table 13.2.2-1in the AP-42 for landfills)
M=12% (source provided this number)
W=?

1. Calculate mean vehicle weight, W

W_{empty} = .88 (20.5 tons) +.04 (20.5 tons) + .08 (5 tons)
W_{empty} = 19.26 tons $\cong$ 19.3 tons

W_{full} = .88 (20.5 tons+16 tons) +.04 (20.5 tons+4.6 tons) + .08 (5 tons+1.4 tons)
W_{full} = 33.6 tons

Assumption-
- half the time the trucks are full and half the time the trucks are empty $\therefore$
W = .5(19.3 tons) + .5(33.6 tons)
W = 26.45 tons

2. Calculate the size-specific emission factor, E

$E=[k(s/12)^a (W/3)^b]/[(M/0.2)^c]$
$E=[2.6(6.4/12)^{0.8} (26.45/3)^{0.4}]/[(12/0.2)^{0.3}]$
E=1.10 lbs/VMT

a. Calculate Vehicle Miles traveled for one truck per day, VMT/truck

Assumptions-

Distance traveled by a vehicle, one way, is 1900 ft. Value provided by source.

The total one way distance is = 1900 ft.
Round trip distance is 2*1900= 3800 ft per vehicle.
3800ft/truck * 1mile/5280ft = 0.720 miles/truck
VMT/truck = 0.72

b. Calculate number of trucks

Urban roll-off trucks (88%) - 16 tons/truck
Rural roll-off trucks (4%) - 4.6 tons/truck
Individual trucks (8%) - 1.4 tons/truck

190 tons/day waste acceptance rate
190(.88) = 167.2/16 = 10.45 trucks/day ≈ 10 trucks/day
190 (.04)= 7.6/4.6 = 1.65 trucks/day ≈ 2 trucks/day
190 (.08)= 15.2/1.4 = 10.86 trucks/day ≈ 11 trucks/day
Total number of trucks per day = (10+2+11) = 23

c. Calculate Vehicle Miles traveled per year, VMT/yr

23 trucks/day * 0.72 miles/truck*312 days/yr = 5166.72 VMT/yr

3. Calculate the PM10 emissions for unpaved roads,

Emissions = 5166.72 VMT/yr * 1.10 lbs/VMT = 5683.392 lbs/yr
Emissions = 5683.392 lbs/yr * 1yr/3120hrs = **1.82 lbs/hr**
Emissions = 5683.392 lbs/yr * 1ton/2000lbs = **2.84 tons/yr**

B. Heavy Construction Operation PM10 Emission

The PM10 emissions from the constant heavy construction operations like bull dozers,

motor graders, compactors, and scrapers are calculated using Tables 11.9-1 and 11.9-2 in the AP-42.

Assumptions
- the Heavy Construction Operations are only related to the placement and removal of the cover material.
- the cover placement takes 2 hours per day.
- 620 hours per year

1. Calculate emission factor for Totally Suspended Particles less than 30 micrograms, TSP $\leq$ 30µm.

$TSP \leq 30\mu m = (2.6(s)^{1.2})/(M^{1.3})$ (kg/hr)

s = material silt content based on the value used in the unpaved road calculations = 6.4%
M= moisture content = 12%
$TSP \leq 30\mu m = (2.6(6.4)^{1.2})/(12^{1.3}) = .954$ kg/hr

PM10 = TSP(.75)
PM10 = (.954)(.75) = .7155 kg/hr
.7155 kg/hr * 2.205 lbs/kg =**1.60 lbs/hr**
1.60 lbs/hr * 620 hrs/yr *2000lbs/ton =**.50 tons/yr**

C. Landfill Cover Emissions

Assumption
- aerodynamic particle is less than 10 microns.
- water truck dust control efficiency is 50%
- the density of soil cover is averaged over a range of numbers accumulated by all the landfills being permitted, 2550 lbs/yd^3
- the density of refuse is averaged over a range of numbers accumulated by all the landfills being permitted, 1187.5 lbs/yd^3
- the percent refuse covered is averaged over a range of numbers accumulated by all the landfills being permitted, 25%
- the mean wind speed is averaged over a range of numbers accumulated by all the landfills being permitted, 5.0 mph

1. Calculate the maximum amount of cover used.

Disposal Rate = 190 tons/day
Refuse Density = 1200 lbs/yd^3
% Volume Soil = 25%

Maximum potential amount of cover used = C_{max} (tons/day)
C_{max} = (disposal rate (tons/day))(2000 (lbs/ton))(Refuse density(lbs/yd^3))(% soil volume)

C_{max} = (190)(2000)/(1200)(.25)
C_{max} = (1266.7 (yd^3/day))(2550 (lbs/yd^3))/(2000 (lbs/ton))
C_{max} = 1615 tons/day

2. Calculate emission from loading cover.

Emission Factor, $E = (k(0.0032)(U/5)^{(1.3)})/((M/2)^{1.4})$

E = emission factor, (lbs/ton)
k = particle size multiplier = 0.35 (*note - value from AP-42, p.13.2.4-6*)
U = mean wind speed (mph) = 5.0
M = material moisture content (%) = 12 (*note - value from AP-42, Table 13.2.4-2*)

$E= ((.35)(0.0032)(5.0/5)^{1.3})/((12/2)^{1.4})$
$E= 9.116 *10^{-5}$

Potential amount transferred (tpy) = (C_{max} (tons/day))(365 days/yr)
Potential amount transferred (tpy) = (1615)(365) = 589475 (tons/yr)

PM10 emission rate = (589475 (tons/yr))(9.116 $*10^{-5}$ (lbs/ton))/(2000 (lbs/ton))
PM10 emission rate = **.027 (tons/yr)**
PM10 emission rate = (.027 (tons/yr))(2000 (lbs/ton))(1yr/8760 hrs)
PM10 emission rate = **.006 (lbs/hr)**

D Non-Methane Organic Compound Emissions (NSPS Applicability)

Assumptions
- the year-to-year solid waste acceptance rate is unknown therefore the equation from 40 CFR §60.754(a)(ii) will be used.
- the methane generation potential (L_O) is equal to 170 cubic meters per megagram.
- the methane generation rate constant (k) is equal to 0.02 for arid climate region.

- the concentration of NMOC (C_{NMOC}) is equal to 4000 ppm as hexane.
- the average acceptance rate (R) is equal to 60000 Mg/yr, provided by the source.
- the age of the landfill (t) is 5 year. I assumed that the average waste acceptance rate over the 5 year period of the permit is 60000 Mg/yr.
- the time since closure (c) is equal to 0, since the landfill is not closed.

$M_{NMOC}=2L_OR(e^{-kc}-e^{kt})(C_{NMOC})(3.6*10^{-9})$

M_{NMOC}= mass emission rate of Non- Methane Organic Compounds (NMOC), Mg/yr
L_O = methane generation potential, cubic meters per megagram solid waste
R= average annual acceptance rate, megagrams per year
k= methane generation rate constant, $year^{-1}$
t= age of landfill, years
C_{NMOC}= concentration of NMOC, part per million by volume as hexane
c= time since closure, years. For active landfills c=0 and $e^{-kc}=1$

$M_{NMOC}=$ $(2)(170)(60000)(e^{-(0.02*0)}-e^{(0.02*5)})(4000)(3.6*10^{-9})$
$M_{NMOC}=$ 27.95 Mg/yr

E. Landfill Gases

To estimate the emissions of other Landfill gases that constitute Hazardous Air Pollutants (HAPs) and compounds subject to the National Ambient Air Quality Standards (NAAQS) and Arizona Ambient Air Quality Guidelines (AAAQG) the following equations will be used.

Assumptions-

- 55% of the landfill gas is CH_4
- 45% of the landfill gas is CO_2
- Temperature of the landfill is 25 degrees C. (AP-42 2.4-6)
- Concentration of each specific compound was taken from a list in the AP-42 Table 2.4-1. The default concentrations include air infiltration correction.
- the mass emission is assumed to be uncontrolled
- VOC molecular weight is assumed to be that of hexane,
- the operating pressure of the landfill is 1 atmosphere

$Q_{CH4}=L_oR(e^{-kc}-e^{kt})$
where,

Q_{CH4}= Methane generation rate at t, m^3/yr;
L_o= Methane generation potential, m^3CH_4/Mg refuse;
R= Average annual refuse acceptance rate during active life, Mg/yr;
k= Methane generation rate constant, yr^{-1};
c= Time since landfill closure, yrs (c=0 for an active landfill);
t= Time since the initial refuse placement, yrs.

$Q_{CH4}=(170\ (m^3CH_4/Mg\ refuse))*(60000\ (Mg/yr))(e^{-((0.02)*(0))}-e^{-((0.02)*(1))})$
Q_{CH4}= 970658 m^3/yr

$Q_p=1.82Q_{CH4}*(C_P / 10^6)$
where,
Q_p = Emission rate of pollutant P, m^3/yr;
Q_{CH4} = methane generation rate, m^3/yr;
C_p = Concentration of P in landfill gas, ppmv;
1.82 = Multiplication factor (assumes that approximately 55 percent of landfill gas is CH_4 and 45 percent is CO_2, N_2, and other constituents).

For Example, we will use Benzene as P.

$Q_{benzene}$ = 1.82 *(970658 (m^3/yr))*((1.91 ppmv)/(10^6))
$Q_{benzene}$ = 3.374 m^3/yr

$Um_p=Q_p*(MW_p\ *1(atm))/[(8.205*10^{-5}\ (m^3\ atm/gmol\ K))*(1000\ (g/kg))*(273+T\ (K))]$

Um_p = Uncontrolled mass emissions of polutant P (kg/yr);
Q_p = Emission rate of pollutant P (m^3/yr)
Mw_p = Molecular weight of P, g/gmol;
T = Temperature of landfill gas, degrees Celsius.

$Um_{Benzene}$ = $(3.374(m^3/yr))*(78.11\ (gmol)*1\ (atm))/[(8.205*10^{-5}\ (m^3atm/gmolK))*(1000\ \ (g/kg))*(273+25\ (K))]$
$Um_{Benzene}$ = **.0108 tons/yr**
= **$5.0*10^{-4}$ lbs/hr**

Listed below are all the HAPs, NAAQS, and AAAQG pollutants that are in the landfill gas and at what rate they are coming out.

Pollutant	**Uncontrolled mass emission rate** (tons/yr)	**Uncontrolled mass emission rate** (lbs/hr)	**NAAQS**	**AAAQG** (July 15, 1992)	**HAP** 112b of the CAA
1,1,1-Trichloroethane	.00096	0.00021918		✘	
1,1,2,2-Tetrachloroethane	.0028	0.00063927		✘	✘
1,1-Dichloroethane	.00349	0.0007968		✘	
1,1 Dichloroethene	.00029	0.0000662		✘	
1,2 Dichloroethane	.00061	0.00013927		✘	
1,2 Dichloropropane	.00031	0.0000708		✘	
2-Propanol	.04518	0.0103150685		✘	
Acetone	.00611	0.001394977		✘	
Acrylonitrile	.00504	0.001150685		✘	✘

Bromodichloro-methane	.0077	0.001757991		✘	
Carbon disulfide	.00066	0.00015068		✘	✘
Carbon monoxide	.05925	0.0135273973	✘		
Carbon tetrachloride	.00001	0.000002		✘	✘
Carbonyl sulfide	.00044	0.00010046		✘	✘
Chlorobenzene	.00042	0.0000959		✘	✘
Pollutant	**Uncontrolled mass emission rate** (tons/yr)	**Uncontrolled mass emission rate** (lbs/hr)	**NAAQS**	**AAAQG** (July 15, 1992)	**HAP** 112b of the CAA
Chloroform	.00005	0.0000114		✘	✘
Chloromethane	.00092	0.00021005		✘	
Dichlorobenzene	.00046	0.00010502		✘	✘
Dichlorodifluoro-methane	.02848	0.006502283		✘	
Ethanol	.01880	0.004292237		✘	
Ethylbenzene	.00734	0.001675799		✘	✘
Hexane	.00849	0.001938356		✘	✘
Hydrogen sulfide	.01815	0.004143836		✘	
Mercury	0.00	0		✘	
Methyl ethyl ketone	.00767	0.001751142		✘	✘
Methyl isobutyl ketone	.00281	0.00064155		✘	✘
Pentane	.00356	0.00081279		✘	
t-1,2-Dichloroethene	.00413	0.00094292		✘	

Trichloroethylene	.00556	0.001269406		✘	✘
Vinyl chloride	.00688	0.001570776		✘	✘
Xylene	.01927	0.004399543		✘	✘
Benzene	.00224	0.00051142		✘	✘
Toluene	.05432	0.0124018265		✘	✘
VOC	**.3038**	**0.0693607306**			
Total HAPS	**0.12446**	**0.0284155251**			

OVERALL LANDFILL EMISSION

Emission Type	Pollutant	Potential To Emit (lbs/hr)	Potential To Emit (tons/yr)
Unpaved Roads	PM10	1.82	2.84
Heavy Construction Operation	PM10	1.60	.50
Landfill Cover	PM10	.006	.027
Non-Methane Organic Compounds	NMOCs	—	27.95 (Mg/yr)
Landfill Gases	VOCs	.0693	.304
	HAPs	.0284	.124

IV. APPLICABLE REGULATIONS VERIFICATION

The Permittee has identified the applicable regulations that apply to each unit in the permit application. Table III summarizes the applicable regulations that apply to each unit.

TABLE III : Applicable regulations verification

UNIT	DATE	CONTROLS	REGULATIONS	VERIFICATION
Landfill	NA	None	40 CFR §60, Subpart A	General Provisions
			40 CFR §60, Subpart WWW,	Standards of Performance for Municipal Solid Waste Landfills
			40 CFR §82, Subpart F	Recycling and Emissions Reduction; regulations pertaining to use and handling of ozone-depleting substances.
			40 CFR §61, Subpart M,	National Emission Standard for Asbestos,
			40 CFR §61.154	Standard for active waste disposal sites.
Tuck Loading/Unloading, Haul Roads, Storage Piles	NA	Watering, etc.	R18-2-604, R18-2-605, R18-2-606, R18-2-607, R18-2-610,	Open Areas, Dry Washes or Riverbeds, Roadways and Streets, Material Handling Storage Piles Evaluation of Non-point Source Emissions
Mobile Sources	NA	NA	AAC R18-2-801 AAC R18-2-802 AAC R18-2-804.A	These rules are applicable to mobile sources.

Misc. Generators	Misc.	NA	A.A.C. R18-2-719.A A.A.C. R18-2-719.B A.A.C. R18-2-719.C.1 A.A.C. R18-2-719.E A.A.C. R18-2-719.F A.A.C. R18-2-719.H A.A.C. R18-2-719.I A.A.C. R18-2-719.J A.A.C. R18-2-719.K	AAC R18-2-719 is applicable to all stationary rotating machinery.

V. PERIODIC MONITORING

Landfill Gas

The monitoring requirements for the landfill gas coming out of the landfill are implemented when the Non-Methane Organic Compound mass emission rate of the landfill exceeds 50 Mg/yr.

If the Permittee decides to install, maintain, and operate an **active collection system**, then the Permittee will be required to monitor;

1. The gauge pressure in the gas collection header on a monthly basis;

2. The Nitrogen or oxygen concentration in the landfill gas on a monthly basis; and

3. The temperature of the landfill gas on a monthly basis.

If the Permittee decides to install, maintain, and operate an **enclosed combustor**, then the Permittee will be required to monitor the temperature of the enclosed combustor and the flow to or bypass of the enclosed combustor.

The temperature monitoring device requires:

- a continuous recorder that has a minimum accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 °C, whichever is greater.
  (A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.)

The device that records flow to or bypass of the enclosed combustor shall either;

- Record the flow to the control device every 15 minutes; or

- Have the bypass line valve secured in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

If the Permittee decides to install, maintain, and operate an **open flare**, then the Permittee will be required to monitor the temperature of the open flare and the flow to or bypass of the open flare.

The open flare requires a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or at the flame itself to indicate the continuous presence of a flame.

The device that records flow to or bypass of the flare shall either,

- record the flow to the control device at least every 15 minutes; or

- Have the bypass line valve secured in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

The Permittee will be required to monitor **surface concentrations of methane** according to the instrument specifications. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

If the Permittee uses a device other than an open flare or an enclosed combustor, then the permittee shall provide information satisfactory to the Director describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Director shall review the information and either approve it, or request that additional information be submitted. The Director may specify additional appropriate monitoring procedures.

If the Permittee seeks to install a collection system that does not meet the specifications for an active collection system or seeks to monitor alternative parameters, then the Permittee shall provide information satisfactory to the Director describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Director may specify additional appropriate monitoring procedures.

Asbestos

The Permittee shall monitor the waste that is being accepted for all asbestos-containing waste material. They must also maintain shipment records of all asbestos containing materials that enter the landfill.

Ozone Depleting Materials

The Permittee shall monitor the amount of Ozone depleting material that enters the landfill area and dispose of it in the proper manner specified in Attachment B of the permit.

Non-point Sources

Visible Emissions

Non-point Sources include loading/unloading, storage, and haul road traffic activities. Typical controls for these sources of fugitive emissions are wetting material, and paving/wetting roads respectively. The applicable requirement for these activities is A.A.C.R18-2-610. This regulation prescribes a 40% opacity limit on visible emissions from Non-point source activity. Each of the activities mentioned above is performed continuously, and results in large emissions of particulate matter. The monitoring plan requires the Permittee to conduct a visual survey of visible emissions from non-point sources biweekly . The visual survey should be performed in accordance with a pre-approved visual observation plan. The visual observation plan should identify a central point, or multiple points from which observations will be taken. The Permittee is required to keep records of the date and results of each survey. Any observed excess emission event will be reported immediately to the Director in accordance with the excess emissions provisions listed in Section XI, Attachment A. Also the Permittee shall ensure that the water trucks are operated daily to control fugitive emissions from haul roads. If the water trucks are not used on a particular day, the Permittee is required to make a record of the date, along with the reason for not using the water trucks.

VI. TESTING REQUIREMENTS

Control Efficiency of Collection System

Testing is required to establish the control efficiency of the collection system. The reduction efficiency or ppmv shall be established by an initial performance test required under 40 CFR §60.8. Method 25C or Method 18 specified in appendix A of the 40 CFR §60 or alternative method approved by the Director shall be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level. If using Method 18 of appendix A in the 40 CFR §60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant

Emission Factors (AP-42).

The collection system must be operated so that the methane concentration is less than 500 ppm above the background at the surface of the landfill. To determine if this level is exceeded, the permittee shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at thirty meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The permittee may establish an alternative traversing pattern that ensures equivalent coverage. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

Removal of the Collection System

After the installation of a collection and control system, the permittee shall calculate the NMOC emissions rate for the purposes of determining when the system can be removed. The calculated NMOC gas produced by the landfill shall be less than 50 Mg/yr on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart. The flow rate of the landfill gas and average NMOC concentration shall be tested on each of the test dates in order to calculate the NMOC mass emission rate.

VII. INSIGNIFICANT ACTIVITIES

No.	POTENTIAL EMISSION POINTS CLASSIFIED AS "INSIGNIFICANT ACTIVITIES" PURSUANT TO A.A.C. R18-2-101.54
1	10000 gallon diesel fuel tank
2	2000 gallon gasoline fuel tank
3	20000 leachate collection storage sump